

ADDITIONAL FEE:

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R E M A R K S

The Office Action issued June 27, 2007 has been received and its contents have been carefully considered.

Claims 58-63 have been withdrawn from consideration.

Claim 34 has been amended to more "particularly point out and distinctly claim" the invention as required by 35 USC §112. In particular, the preamble of this claim has been amended to provide antecedent basis for "a lip of a windshield wiper blade" and the recitation of the cutting unit has been amended to recite that the "second wiper blade guide" forms "a fixed width channel which is adapted to surround and guide the lip of the wiper blade during cutting." This second wiper blade guide, as best illustrated in Figs. 11-13 of the drawings, maintains the wiper blade lip in a proper relationship with the cutting blade, thus avoiding deformations of the lip during the cutting process. This is of great importance for obtaining good cutting results.

To applicant's knowledge, there is no known device for cutting the lip of a used wiper blade that really works and provides good results. The devices known in the art all produce an inaccurate and uneven cut of the wiper blade lip. This is caused by inadequate guidance of the wiper blade and its lip.

The claims of this application have been rejected under 35 USC §102 over the German Patent No. 29 806 561.7 to Wessels and under 35 USC §103 over Wessels in view of the German Patent No. 4,110,799 to Diebold and the U.S. Patent No. 6,581,291 to Tarpill. It is believed that claim 34, as presently amended, distinguishes patentably over all of these references.

The patent to Wessels discloses a "cutting device for renewing used wiper blades" having a spring element 4, mounted on the base plate 2, for guiding and stabilizing the wiper blade lip 3 as it passes over the cutting blade 1. This spring element is required to exert great pressure in order to provide sufficient guidance to the wiper blade lip. This results in friction that produces an inaccurate and uneven cutting surface. If the spring pressure exerted by the spring element is reduced to avoid unwanted pressure to

the wiper blade, the spring element can no longer guarantee precise guidance of the wiper blade, resulting again in an inaccurate and uneven cut.

Contrary to the reasoning of the Examiner, the spring element does not provide a second guide with a "fixed width". Assuming that there is a complimentary spring element on the opposite side of the wiper blade, it is the nature of such spring element that the width and position of the passage between the two spring elements facing each other will change.

Wessels teaches that a wiper blade guide with varying width is required, or at least advantageous, for proper guidance of the wiper blade.

In contrast, the present invention provides a "second wiper blade guide", with a fixed width channel. Experiments have shown that such a fixed width channel is extremely important for the successful cutting of a wiper blade.

The German patent to Diebold discloses an "edge cutter for rubber blades of windshield wipers". With this device, the second guide is displaced from the lip of the wiper blade. For this reason, this second guide cannot provide proper and sufficient guidance for the wiper blade during

the cutting process. In addition, the second guide consists of two guidance elements that are manually adjustable in order to allow for different wiper blades with different thicknesses. Without considerable experience, it is difficult to separately adjust the two guide elements in such a manner that the lip of the wiper blade is: properly centered, not distorted, not compressed and too loosely guided.

Any one of these conditions would result in jamming or an inferior cut.

Furthermore, these manually adjustable guide elements are quite long, thereby increasing the frictional forces that are applied to the wiper blade during the cutting process. Finally, these devices are mounted on ball joints, which sometimes results in jamming the blades during the cutting process.

The patent to Tarpill was discussed at length in applicant's prior Amendment. Suffice it to say that Tarpill discloses a device for slitting and stripping a cable, rather than for cutting wiper blades. Tarpill's device does not provide a "first guide" and a "second guide", both of

which are necessary to guide a wiper blade in the manner required to provide a sufficiently even cutting surface.

For the information of the Examiner, a corresponding patent application filed in the European Patent Office has issued as European Patent No. EP 1 542 838 B1. A copy of the portion of this patent containing the claims in English is attached to this Amendment.

In conclusion, therefore, it is believed that claim 34, as amended, distinguishes patentably over the three prior art references cited and applied by the Examiner. Since claim 34 is the only independent claim remaining in this application, this application is believed to be in condition for immediate allowance. A formal Notice of Allowance is respectfully solicited.

Respectfully submitted,

By


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on OCTOBER 22, 2007

MILDE & HOFFBERG, LLP

By


Date OCTOBER 22, 2007



EP 1 542 838 B1

20. Anordnung nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet**, dass ein Körper (V) die Form eines hohlen, einseitig offenen Zylinders oder Prismas aufweist, der/das einen Grundkörper (A) mit einer Schneideinheit (B) dackelartig umfasst, wobei der Körper (V) und der Grundkörper (A) in Richtung ihrer Achse gegeneinander verstellbar sind.
21. Anordnung nach Anspruch 20, **dadurch gekennzeichnet**, dass der Zylinder (V) oder das Prisma und der Grundkörper (A) zur Verstellung mittels eines Gewindes verdrehbar miteinander verbunden sind.
22. Anordnung nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet**, dass die Schnittkante der Klinge senkrecht zur Bewegungsrichtung und senkrecht zur Abtragrichtung liegt.
23. Anordnung nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet**, dass die Klinge in Abtragrichtung schräg gestellt ist.
24. Anordnung nach einem der Ansprüche 1 bis 21, **dadurch gekennzeichnet**, dass die Klinge in Abtragrichtung derart geknickt ist, dass die Schnittfläche V-förmig ist.
25. Anordnung nach einem der Ansprüche 1 bis 21, **dadurch gekennzeichnet**, dass die Klinge in Abtragrichtung derart gebogen ist, dass eine konkave Schnittfläche entsteht.
26. Anordnung nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet**, dass die Schnittkante der Klinge pfelförmig in Bewegungsrichtung des Scheibenwischerblattes verläuft.
27. Anordnung nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet**, dass Mittel zur Fixierung der Lage der Klinge im Schnittbereich vorgesehen sind.
28. Anordnung nach Anspruch 27, **dadurch gekennzeichnet**, dass die Mittel bewirken, dass die Klinge fest auf an den Schnittbereich unmittelbar angrenzenden Flächen aufliegt.
29. Anordnung nach einem der vorhergehenden Ansprüche, **gekennzeichnet durch** eine Begrenzung der ersten Führung in Abtragrichtung, die mit der Schneideinheit verstellbar ist und eine vorgegebene Position zur Schnittkante in Abtragrichtung aufweist.
30. Anordnung nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet**, dass eine Einrichtung zur Messung der Schneidtiefe **dadurch** gebildet wird, dass ein zusammen mit der Klinge verstellbarer Anschlag (Z) vorgesehen ist und eine Führung (Y), welche in mindestens eine der Nuten des Scheibenwischerblattes eingreift, dem Anschlag (Z) gegenübersteht.
31. Anordnung nach Anspruch 30, **dadurch gekennzeichnet**, dass der Anschlag (Z) am Ende eines für das Scheibenwischerblatt vorgesehenen Kanals angeordnet ist und dass die Führung von einem Endbereich der ersten Führung (W) gebildet ist.
32. Anordnung nach Anspruch 30, **dadurch gekennzeichnet**, dass der Anschlag (Z) seitlich aus der Anordnung herausragt und eine an der Längsseite der Anordnung angeformte Leiste die Führung (Y) bildet.

Claims

1. Arrangement for retro-actively cutting wiper blades, with a first guide (D) which engages in grooves on both sides of the wiper blade, and with a second guide (L) which surrounds the lip (M) of the wiper blade in the vicinity of the edge which is to be retro-actively cut, wherein the second guide (L) forms a cutting unit (B) together with a blade (J), and wherein the cutting unit (B) and the first guide (D) can be adjusted with respect to each other in the removal direction, **characterized in that** the second guide (L) has a fixed width in such a manner that the lip (M) of the wiper blade is guided in a smooth-running manner.
2. Arrangement according to Claim 1, **characterized in that** the second guide (L) narrows in the direction of movement from a greater width to the fixed width.

3. Arrangement according to one of the preceding claims, **characterized in that** the second guide (L) has a depth which surrounds that part of the lip (M) which is to be cut off.
- 5 4. Arrangement according to one of the preceding claims, **characterized in that** the second guide (L) widens, starting at the cutting edge of the blade (J), to a waste channel (H).
5. Arrangement according to Claim 4, **characterized in that**, the waste channel (H) has a width and a depth of at least twice the width of the lip (M).
- 10 6. Arrangement according to one of Claims 1 to 5, **characterized in that** the first guide (D) is part of a basic body (A), and **in that** the cutting unit (B) is mounted adjustably in the basic body (A).
7. Arrangement according to Claim 6, **characterized in that** a further waste channel (N), the cross section of which corresponds at least to that of the waste channel (H), is arranged in the basic body (A).
- 15 8. Arrangement according to either of Claims 6 and 7, **characterized in that**, for adjustment purposes, a spindle (F) is arranged on the cutting unit (B) and is operatively connected in a play-free manner to a spindle nut (E) mounted in a cutout of the basic body (A).
- 20 9. Arrangement according to one of the preceding claims, **characterized in that** the position of the cutting unit (B) can be locked.
10. Arrangement according to one of the preceding claims, **characterized in that** the first guide (D) is longer than the second guide (L).
- 25 11. Arrangement according to one of the preceding claims, **characterized in that** the first guide (D) is between 70 mm and 200 mm long.
12. Arrangement according to one of the preceding claims, **characterized in that** the first guide (D) is curved in the longitudinal direction of the wiper blade.
- 30 13. Arrangement according to one of the preceding claims, **characterized in that** a measuring device (O, P, Q, R; T, S, U) is provided.
- 35 14. Arrangement according to Claim 13, **characterized in that** the measuring device is formed by a scale (T) in a channel receiving the wiper blade, and by a viewing opening (U).
15. Arrangement according to Claim 13, **characterized in that** the measuring device is formed by a scale (T) on both sides of a channel receiving the wiper blade, and by a movable stop (S).
- 40 16. Arrangement according to Claim 13, **characterized in that** the measuring device is formed by a movable measuring sensor (O).
17. Arrangement according to one of Claims 1 to 13, **characterized in that** a see-through device is provided at a predetermined distance from the blade, as measured in the removal direction.
- 45 18. Arrangement according to one of the preceding claims, **characterized in that** at least one of the guides (D, L) is provided with a friction-reducing surface.
- 50 19. Arrangement according to one of the preceding claims, **characterized in that** a plurality of first guides (D) are arranged in a body (V).
20. Arrangement according to one of the preceding claims, **characterized in that** a body (V) is in the form of a hollow cylinder or prism which is open on one side and surrounds a basic body (A) with a cutting unit (B) in the manner of a lid, the body (V) and the basic body (A) being adjustable in relation to each other in the direction of their axis.
- 55 21. Arrangement according to Claim 20, **characterized in that** the cylinder (V) or the prism and the basic body (A) are connected rotatably by means of a thread to one another for adjustment.

22. Arrangement according to one of the preceding claims, **characterized in that** the cutting edge of the blade is located perpendicular to the direction of movement and perpendicular to the removal direction.
- 5 23. Arrangement according to one of the preceding claims, **characterized in that** the blade is positioned obliquely in the removal direction.
24. Arrangement according to one of Claims 1 to 21, **characterized in that** the blade is bent in the removal direction in such a manner that the cut surface is V-shaped.
- 10 25. Arrangement according to one of Claims 1 to 21, **characterized in that** the blade is curved in the removal direction in such a manner that a concave cut surface is produced.
26. Arrangement according to one of the preceding claims, **characterized in that** the cutting edge of the blade runs in an arrow-shaped manner in the direction of movement of the wiper blade.
- 15 27. Arrangement according to one of the preceding claims, **characterized in that** means for fixing the position of the blade in the cutting region are provided.
28. Arrangement according to Claim 27, **characterized in that** the means cause the blade to rest fixedly on surfaces directly adjacent to the cutting region.
- 20 29. Arrangement according to one of the preceding claims, **characterized by** a boundary of the first guide in the removal direction, which boundary can be adjusted by the cutting unit, and by a predetermined position with respect to the cutting edge in the removal direction.
- 25 30. Arrangement according to one of the preceding claims, **characterized in that** a device for measuring the cutting depth is formed in such a manner that a stop (z) which can be adjusted together with the blade is provided, and a guide (Y), which engages in at least one of the grooves of the wiper blade, is located opposite the stop (Z).
- 30 31. Arrangement according to Claim 30, **characterized in that** the stop (Z) is arranged at the end of a channel provided for the wiper blade, and **in that** the guide is formed by an end region of the first guide (W).
32. Arrangement according to Claim 30, **characterized in that** the stop (Z) protrudes laterally out of the arrangement and a strip integrally formed on the longitudinal side of the arrangement forms the guide (Y).
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Revendications

- 40 1. Dispositif permettant de recouper des raclettes d'essuie-glaces, comportant un premier guidage (D), qui s'engage dans des rainures sur les deux côtés de la raclette d'essuie-glace, et un deuxième guidage (L), qui comprend la lèvre (M) de la raclette d'essuie-glace à proximité de l'arête à recouper, dans lequel le deuxième guidage (L) forme une unité de coupe (B) avec une lame (J), en ce que l'unité de coupe (B) et le premier guidage (D) sont déplaçables l'un par rapport à l'autre dans la direction d'enlèvement, **caractérisé en ce que** le deuxième guidage (L) présente une largeur fixe, de telle manière que la lèvre (M) de la raclette d'essuie-glace soit guidée librement.
- 45 2. Dispositif selon la revendication 1, **caractérisé en ce que** le deuxième guidage (L) se rétrécit dans la direction de mouvement, depuis une plus grande largeur jusqu'à la largeur fixe.
- 50 3. Dispositif selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le deuxième guidage (L) présente une profondeur, qui comprend la partie à recouper de la lèvre (M).
4. Dispositif selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le deuxième guidage (L) s'élargit en un canal à déchets (H) en commençant près de l'arête de coupe de la lame (J).
- 55 5. Dispositif selon la revendication 4, **caractérisé en ce que** le canal à déchets (H) présente une largeur et une profondeur valant au moins le double de la largeur de la lèvre (M).
6. Dispositif selon l'une quelconque des revendications 1 à 5, **caractérisé en ce que** le premier guidage (D) fait partie